

REMARKS

Reconsideration and withdrawal of the examiner's rejections under 35 USC § 103 are respectfully requested in view of the claim amendments and following remarks.

Independent Claims 1, 14 and 17 have been amended, without prejudice, to specify about 0.5 to about 12.0 % by weight emulsifier and that viscosity building emulsifier makes up about 0.1 to about 4.0 percent by weight of the edible emulsion, with the proviso that when chemical emulsifier is used, less chemical emulsifier is used than viscosity-building emulsifier. Support for this amendment may be found at page 9 of the Specification and in original claim 7, which has been canceled, without prejudice.

Claim 1 has been further amended, without prejudice, to specify that the emulsion is an oil-in-water emulsion to more clearly distinguish the present invention over the art. Support for this subject matter may be found in the Specification at page 10 and in claim 2 which has been canceled, without prejudice. Claim 1 has also been amended to specify the amount of insoluble fiber, basis for which is in claim 6 which has been canceled, without prejudice. See also Specification at page 7.

Claim 8 has been amended to reflect its dependency on amended claim 1.

Claims 10, 11 and 13 have been amended to correct typographical errors. Support for these amendments may be found in the Specification at page 9.

Claim 20 has been amended for consistency in its dependence on amended claim 1.

Claim 25 has been amended to specify 3.8 % starch to correct a typographical error, based on the Specification, specifically at page 2.

The Present Invention

As set forth in independent claims 1, 14 and 17, the present inventions are directed to an edible emulsion, a method for making the edible emulsion and a food product comprising the edible emulsion. Preferably, the emulsion is an oil-in-water emulsion. The edible emulsion comprises, among other things, insoluble fibers and specifically 0.5 to 12% by weight emulsifier comprising a viscosity-building emulsifier that at 2.0% by weight is partially or completely not soluble in acidified deionized water having a pH of less than or equal to 5.5, or a viscosity-building emulsifier that is at least about 50% by weight protein, or both. The viscosity-building emulsifier makes up from 0.1 to 4.0% by weight of the edible emulsion, with the proviso that when chemical emulsifier is used, less chemical emulsifier is used than viscosity-building emulsifier. The reduced oil food products made with the edible emulsion have consumer acceptable appearances, viscosities and texture, as well as sensorial properties consistent with full fat products.

Furthermore, the food products made with the edible emulsion comprising insoluble fiber, thickener and viscosity-building emulsifier of this invention have, in addition to excellent texture and sensorial properties, the added health benefit associated with food products containing fiber. Such food products also have the benefit of being substantially free of carbohydrates; therefore, very desirable to high protein/low carbohydrate dieters.

The Present Invention is Not Obvious under 35 U.S.C. § 103(a)

Claims 1-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hercules, Inc. (EP 0757895) as further evidenced by Lowe. According to the Office Action, Hercules discloses low fat salad dressing made to contain a pectin derivative as a partial or complete fat substitute. ; The dressing formulation is shown at the example bridging columns 6 and 7, starting at line 37.; In this case, the pectin component is regarded as the insoluble fiber source.; Casein is a selected protein for this composition.; Up to 35% fat is disclosed for use at column 5, line 9.; The pH of the emulsion is shown at column 2, line 58.; The use of egg white is contemplated at column 5, line 17.; It is appreciated that “viscosity building” emulsifier is not mentioned in the reference but one of ordinary skill in the art would have expected the viscosity to be further enhanced by the addition of any of the proteins in Hercules.; It is appreciated that the HLB of the emulsifiers and the oil droplet size of the composition are not mentioned, but no unobvious or unexpected results are seen from the recitation of these features, particularly when a stable emulsion is formed.; It is also appreciated that the settings for the homogenizer are not mentioned but to use one type of colloid mill over another would have been an obvious matter of choice with regard to the particular homogenizing apparatus that was available.

Applicants respectfully traverse.

Firstly, Pectin may not be regarded as insoluble fiber. Hercules ‘895 is directed to the use of amidated galacturonic acid methyl esters with a degree of esterification below 55 % (LMA pectin) to replace part or all of the fat in a salad dressing. See Col. 2, lines 31-35. LMA pectin is a gelling agent used as a stabilizer. See Col. 4, lines 21-36. However, nothing in Hercules ‘895 suggests that pectin is an insoluble fiber. Furthermore, according to the Merck Index, pectin is almost completely soluble in water.

In contrast, insoluble fiber, according to the present invention, means fiber that is not water soluble whereby, when the same is supplied as an additive composition, the additive composition is not more than 50 % by weight soluble fiber, based on total weight of soluble and insoluble fiber in the additive composition. See Specification at page 4. Accordingly, the Office Action premise for making the obviousness rejection should be reconsidered, and the rejection withdrawn.

While Lowe is relied upon in the Office Action to teach that casein is a well-known emulsifier for foods, Applicants respectfully submit that Lowe teaches away from the invention of the amended Claim 1. According to Lowe, casein is an emulsifier that produces a water-in-oil emulsion: “Saturated casein solutions with common food fats tend to form water-in-oil emulsions.” In contrast, the present invention is an oil-in-water emulsion.

The present invention differs from the cited art in the requirement that the protein in the oil-in-water emulsion composition be a viscosity building emulsifier. Notably, the presence of the viscosity building emulsifiers has shown (see example 2) that mayonnaise made via this invention has shine or sheen (which was key), firmness, mouth dissipation, and viscosity consistent with real mayonnaise, notwithstanding the fact that about 42% less oil was used. None of the references in any combination discloses the emulsifier mixture now depicted in the amended claims, all of which is important to achieve the above-described desired rheological and appearance characteristics. As to claims 22 and 23, these claims further define the food product by characterizing mouth dissipation and product sheen to that which is similar to full fat mayonnaise which typically has about 76% by weight oil.

CONCLUSION

In light of the above amendments and remarks, applicants submit that all claims now pending in the present application are in condition for allowance. Reconsideration and allowance of the application is respectfully requested.

If a telephone conversation would be of assistance, Applicant's undersigned attorney invites the Examiner to telephone at the number provided.

Respectfully submitted,

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